

REMARKS/ARGUMENTS

Upon entry of this amendment, claims 1, 2, 4, 5, 6 and 7 will be canceled without prejudice or disclaimer of the subject matter recited therein, and claims 3 and 8 will be amended, whereby claims 3 and 8 will remain pending. Claims 3 and 8 are independent claims.

By the amendment herein, claim 3 is amended to include subject matter recited in claims 5 and 7, and a similar amendment is being made to claim 8. Additionally, the spelling of N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4[(4-nitrophenyl)azo]-benzene**amine** has been corrected from N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4[(4-nitrophenyl)azo]-benzene**amide**.

Applicants submit that the spelling correction in the naming of N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4[(4-nitrophenyl)azo]-benzeneamine in the specification and the claims does not constitute new matter because the spelling correction is readily evident to one having ordinary skill in the art especially in view of Applicants' disclosure including the Example beginning at page 10 of Applicants' originally filed specification.

Entry and consideration of this amendment after final rejection is appropriate because the amendment seeks to advance prosecution of the application by amending the claims to advance prosecution by addressing the 35 U.S.C. 112, second paragraph, rejection, and amending the claims to even more specifically recite the reactions.

Reconsideration and allowance of the application are respectfully requested.

Consideration Of Information Disclosure Statements

Applicants express appreciation for the inclusion with the Office Action of initialed copies of the Form PTO-1449, whereby the Examiner's consideration of the Supplemental Information Disclosure Statement, filed March 13, 2007, and the Second Supplemental Information Disclosure Statement, filed June 8, 2007, is of record.

Upon review of the initialed Forms PTO-1449, Applicants note that the initialed forms include confirmation of consideration of English abstracts of four Japanese patent documents but has crossed through the Japanese patent documents as not including a translation. Applicants request that the Examiner indicate consideration of the Japanese documents with their English Abstracts, and are enclosing a Form PTO-1449 once again listing the Japanese patent documents. The Examiner is therefore respectfully requested to indicate consideration of the Japanese patent documents, in addition to their previously indicated as considered English abstract, with the next communication from the Patent and Trademark Office.

Claim Of Priority

Applicants express appreciation for the acknowledgement of the claim for foreign priority of JP 2002-312131, filed October 28, 2002, and receipt of the certified copy.

Rejection Under 35 U.S.C. 112, Second Paragraph

Claims 1, 3 and 7-8 are rejected under 35 U.S.C. 112, second paragraph, as the rejection contends that the claims are indefinite in the recitation of "a group capable of reacting with the hydroxyl group".

In response, and without expressing any agreement and/or acquiescence with the rejection of record, claims 3 and 8 have been amended herein to recite that the hydroxyl group is protected by a chloroacetyl group.

Accordingly, at least for the reasons set forth in Applicants' previous response and the amendment of the claims in the present response, this ground of rejection should be withdrawn.

Art Based Rejection

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ito Y. et al. (hereinafter "Ito"), Chem. Eur. J 2002, 8(14), 3076-3064), in view of Attardi et al.- also referred to in the rejection as Taddei et al. (hereinafter "Attardi"), Tet. Let. 41(2000) 7395-7399.

The rejection contends that Ito discloses the use of p-nitrobenzylpyridine (PNBP) for the detection of the monochloroacetyl (CAc) group in solid phase synthesis of oligosaccharides (sugars), and that the protecting groups presence (or absence) should be detectable with high specificity and precision.

The rejection states that Ito does not expressly disclose the use of an azo dye compound of the formula X-Y for the detection of the presence of hydroxyl groups, but contends that it would have been obvious to one of ordinary skill in the art at the time the invention was made to synthesize the TCT adduct of Disperse Red dye and to use it to monitor the presence of OH groups on a solid phase during oligosaccharide synthesis, as well as to monitor the presence of chloroacetyl group using p-nitrobenzylpyridine (PNBP), because Ito discloses the use of PNBP to monitor the presence of OH groups during solid-phase synthesis of oligosaccharides, and Attardi discloses the use of an azo dye with strong structural similarity to Disperse Red and its addition to TCT to monitor the presence of OH groups in solid phase synthesis.

In response, Applicants submit that for the reasons previously advanced, the rejection does not set forth an adequate basis to establish a *prima facie* case of obviousness. However, in an attempt to advance prosecution of the application, the claims have been amended herein to include that two types of reactions are carried out. In particular, claims 3 and 8 include, amongst other features recited therein, (1) reaction of the sugar having a hydroxy group or hydroxyl group protected by a chloroacetyl group with N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4-[(4-nitrophenyl)azo]-benzeneamine; and (2) reacting of the sugar with (p-nitrobenzyl)pyridine under basic conditions.

There is no teaching or suggestion in either of Ito or Attardi taken alone or in combination to arrive at the subject matter recited in Applicants' claims.

In the case of synthesizing a sugar chain on a solid phase, the completion of two reactions need to be monitored, namely, a glycosylation reaction (disappearance of hydroxyl group), and a deprotection reaction of the protecting group, e.g., chloroacetyl group, in order to obtain the reaction product successfully. The present invention has been made on the basis of such finding. However, neither of the documents utilized in the rejection discloses nor suggests such finding, and Applicants submit that there is not an appropriate basis in the cited prior art to arrive at Applicants' claimed subject matter. Thus, the prior art does not provide sufficient indication why one having ordinary skill in the art, absent Applicants' disclosure, would have combined the disclosures of Ito which is directed to tag-reporter and resin capture-release strategy in oligosaccharide synthesis, and Attardi which is directed to a sensitive visual test for detection of OH groups on resin.

Applicants once again note that Ito discloses, at page 3078, last paragraph on the page, that the real-time monitoring of CAC deprotection, a color test report by Riguera, came to their

attention. They note that this color test was originally developed for the detection of alcohols and consists of three step operations; 1) conversion to tosylate, 2) treatment with *p*-nitrobenzylpyridine (PNBP), and 3) deprotonation of the pyridinium salt with piperidine. Ito discloses that they expected that the CAc group would be detectable by PNBP/piperidine treatment, which generates the strongly colored salt 4 (Scheme 2).

Further, Ito discloses at page 3079, right-hand column, the full paragraph, the TLC color test, which was carried out according to Riguera's protocol, was used to monitor the reaction and judge completion of deprotection.

In contrast, Attardi does not relate to such a method, but relates to a sensitive visual test for detection of OH groups on resin. Moreover, in Attardi, a fluorescent substance is used. There is no reason why one having ordinary skill in the art would this disclosure with Ito absent Applicants' disclosure, and as noted above, it is improper to use Applicants' disclosure to support a prior art combination.

In any event, any combination of Ito and Attardi does not teach or suggest, as noted above, (1) reaction of the sugar having a hydroxy group or hydroxyl group protected by a chloroacetyl group with N-[2-[(4,6-dichloro-1,3,5-triazin-2-yl)oxy]ethyl]-N-ethyl-4-[(4-nitrophenyl)azo]-benzeneamine; and (2) reacting of the sugar with (*p*-nitrobenzyl)pyridine under basic conditions.

Thus, the rejection should be withdrawn at least for the above, and each of the pending claims should be indicated to be allowable.

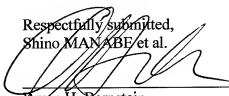
CONCLUSION

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims.

Applicants therefore respectfully request that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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